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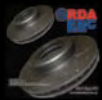
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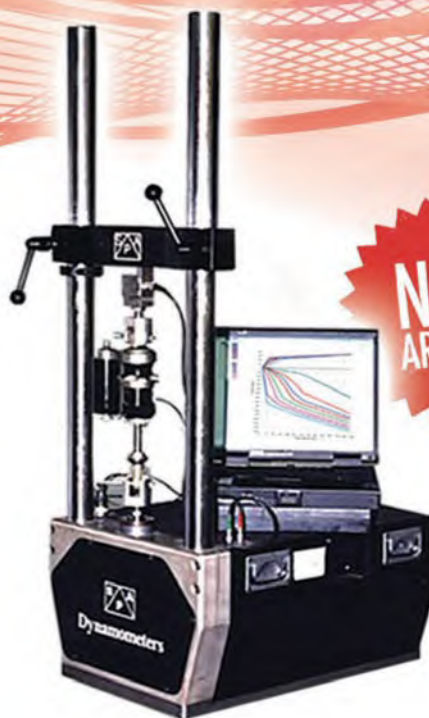
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THIS IS A 1600 THAT HAS THE
WHOLE SCENE TALKING

SOMETHING TO **TORQUE** ABOUT

PHOTOGRAPHY BY WWW.AUTOSHOTZ.COM.AU







It's hard to believe this is still a streeter that can run 9sec, but look at this interior. It's comfier than my lounge room

IT COULD VERY WELL BE THE QUICKEST STREET-REGISTERED 1600 OUT THERE



Mick McGregor (40) works as a smash repair estimator. This occupation has given him a keen eye for what makes great bodywork (and not so great). He's poured all his extensive knowledge and passion into this 1600, and the result is drop dead gorgeous.

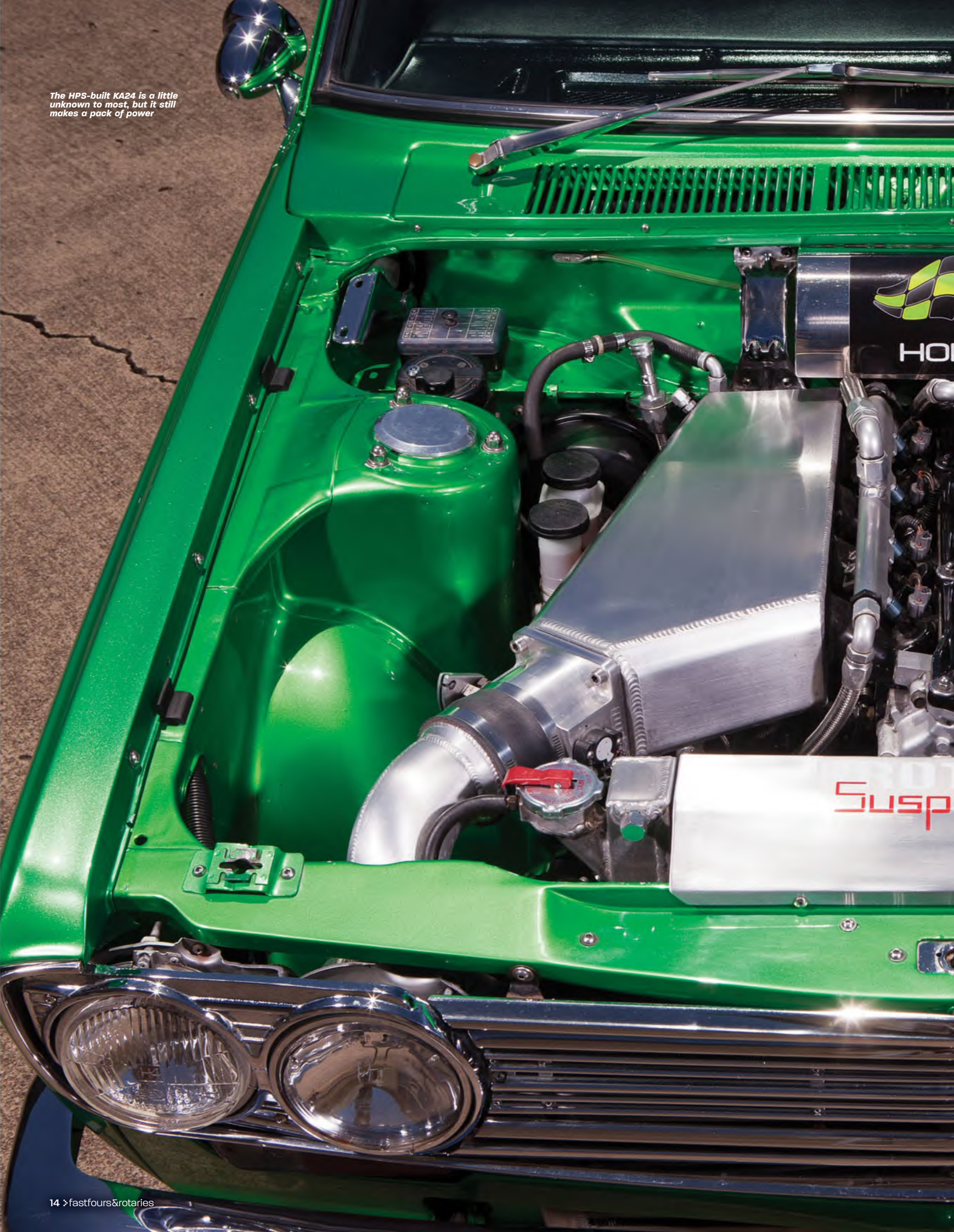
Says Mick, "I have always liked the 1600 ever since a mate of mine looked after one for one of his work mates. It had a warm L18, Bluebird electronic dizzy, exhaust and twin Webers. I didn't have my driver's licence yet, as I was too young, but we had a lot of fun in that car. This is when I knew I wanted a 1600."

Mick built this one to be a tough streeter. It's as reliable a 1600 as you'll ever find and tough to boot, with a strong driveline. In fact, it could very well be the quickest street-registered 1600 out there. Mick's had other 1600s before, and a wagon, along with a 1200 coupe, 720 2WD, 720 4WD, Series II Silhouette and Z24 turbo'd Pathfinder, but this 1600 is special. It's been 14 years in the build... and still going.

"Build cost is something I have never kept track of, as it has been over such a long period of time with set-ups changing. I have owned Datsuns for 20 years and will always own at least one, I think."

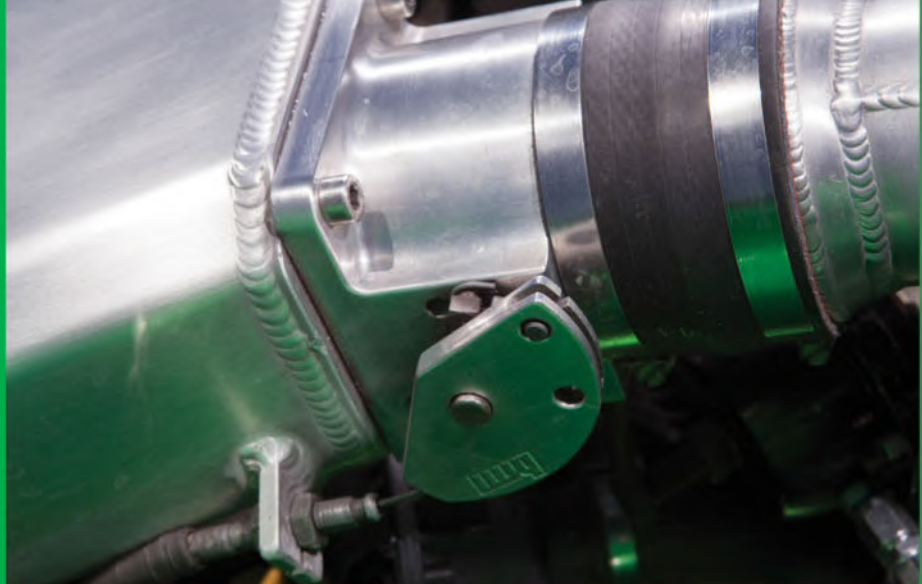
Of course, there are many things Mick would do differently if he had his time over, but he's still happy with where the car's currently at. "I like it when somebody comes up after seeing my car and assumes it has an SR or FJ in it. I take great pleasure in telling them it's a KA24. I get a lot of blank looks while most people process it, as a lot of people don't bother to know the not-so-common

The HPS-built KA24 is a little unknown to most, but it still makes a pack of power



I LIKE IT WHEN
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HAS AN SR
OR FJ IN IT. I
TAKE GREAT
PLEASURE
IN TELLING
THEM IT'S
A KA24





engines. Think outside the square, people. I am not the first to do it, but it is a bit different.

"I don't have any Datsport/Maddat fitting kits or any parts from them for that matter. Some of it is very dated. For example, my rear brakes are Starion Turbo, which were off my first 1600. That brake set-up would have been done in 1998 or maybe 1997. I like the fact it is different in so many ways to the majority."

In November 2014 Mick and his 'crew' went out to Queensland Drag Week. They drove to Toowoomba from Brisbane to meet up with all the other competitors and then drove to Warwick and raced the 1/8 mile before driving to Willowbank for the quarter. "I won my class (blown X235) with a 6.2@115mph and a 9.6@140mph, and was actually placed second outright, even against all the blown X275 cars. What made it even sweeter was the fact I did not have a support vehicle, as a lot of the cars had support vehicles and crew."

Winning the 1960-1970s Best Car gong at the Brisbane Hot Rod Show in 2008 when Queensland Performance

The candy green has always made NIS a standout at events. It can be hard trying to wrangle your eyes between the body and the engine bay at times



THINK OUTSIDE THE
SQUARE, PEOPLE

Datsun Club had a display there was also a highlight, and a bit of a shock. There are also many memories from the Brisbane and Sydney Jamborees, but the plan now is to go faster but still remain streetable. The cage is teched for a nine flat, so that's the goal. We doubt it will take 14 years to get there this time...

Thanks: "My wife Kell and my #1 crew chief Axel, Tony from Geartorque, Justin from Horsepower Solutions (HPS), Darren and Steve from Protrac Suspension, Scott from Haltech, Warren from BRS Brisbane Refinish Supplies, Buzz, Mick and Dan for helping work on it." 🏁

*I LIKE THE FACT IT IS **DIFFERENT** IN
SO MANY WAYS TO THE MAJORITY*





SPECS

ENGINE: KA24DE+T

PERFORMANCE: 580hp, 9.45@142mph

ENGINE HARDWARE: Crower rods, Ross pistons and rings, Tighe cams, Kawasaki valvesprings, mild porting, custom sump, Davies Craig water pump, ID 2000cc injectors, two Eliminator Aeromotive fuel pumps, custom intake manifold, GT35 turbo (1.02 rear) with 44mm TiAL wastegate, 'China' intercooler, BMW radiator with custom end tanks, 16in Spal thermofan, 3in custom exhaust system, MSD LS1 coils, Haltech Platinum Sport 1000 engine management system

DRIVETRAIN: Trimatic modified by Tony at GearTorque, TCE stall convertor, extra frictions, billet servo piston, fully rollerized, custom belt trans valvebody, R200 diff, R32 GT-R LSD centre (3.9), shortened R32 GT-R axles, billet stub axles

SUSPENSION/BRAKES: King Springs, Koni adjustable shocks, S13 front rotors with HiLux calipers, Datsun 180B booster, 7/8in master cylinder, Starion Turbo rear brakes

WHEELS/TYRES: 15x5in front and 15x8in rear wheels, 185/65 front tyres, 235/60 Mickey Thompson Radials rear

BODYWORK: Lime Gold Candy respray (House of Kolor), flared rear doors and guards

INTERIOR: Series VI RX-7 front seats, repadded rear seat, suede rooflining and trim, Auto Meter gauges, Hurst pistol-grip shifter, steel ANDRA roll cage teched to 9sec flat, Kenwood head unit, front speakers and rear speakers, RPM harnesses

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MR NICE GUY

A NICE ONE IT MAY BE, BUT THAT'S FAR FROM HOW THIS
EVO BEHAVES WHEN PLAYING WITH OTHERS

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Fitter Jono Goddard, 23, has owned this 2001 Mitsubishi Evolution VII for two years. “I’ve always loved Evos,” he told us. “They look amazing and they go even better.”

His goes better than most...

Jono built this one for fun and a bit of competition. The build was never intended to be serious or substantial, but somewhere along the way Jono has wound up pouring in far more time and money than he ever anticipated. Such is (car) life.

Previous to this was a Toyota Supra, GU Patrol and Toyota LandCruiser. Land ships aside, the Supra was fun, but the Evo delivers the kind of all-paw pounding you just cannot match. It was the perfect base to build up something worthy of the track.

The actual build took six months and cost a total of \$40,000, well over the purchase price of the vehicle itself. “I bought this car when I became an open licence





driver, so it's my first turbo car and I'm loving it, with no regrets. I kept the engine standard for about a year and just worked on the bolt-ons and getting the appearance and stance looking good. After I was happy with that, I saved some money and decided to go bigger with the engine, so a turbo upgrade was in need.

"I was originally going to go an FP Green ball-bearing turbo, but they were just out of stock and it was going to be a long wait, but they did have an FP Red available. I couldn't wait, so I went with the Red. I understood the risks putting it in a stock Evo VII bottom end because of the weak conrods, but I went with it anyhow. It lasted 24 runs on 98 octane. We then switched to E85 and on the third run she popped. Unlucky. That's when it started. That's when the real build starting taking place.

When it came to reliability, Jono wanted a stroker with a strong block. This is where the Nitto gear came in with the 4340 billet steel crank to match. Iron Man himself would have a hard time putting a dent in this engine now.

"I love driving this car," continues Jono. "It gets a lot of respect on the road and turns heads, which shows that the work, time and effort I've put in has paid off. The best part of the car would have to be its appearance. The carbon-fibre add-ons top it off." That they do."

Jono installed the carbon-fibre extensions himself with Stylish wheels rolling the guards. When Jon debadged the boot the paint came off, so he had to get the boot resprayed. Apart from that the exterior was very clean when he picked it up, so there were really very few

**IRON
MAN
HIMSELF
WOULD
HAVE A
HARD TIME
PUTTING A
DENT IN THIS
ENGINE**



The standard motor just couldn't handle the big boost the Red was putting out, but this new stroker loves it

issues. A rear bar and Evo IX spoiler are possibilities, but for now they're not pressing the door down with urgency.

Next time Jono says that he won't take the risks of pushing a stock block. As for the car, "I'll be keeping it for a long time. One day I'll get a bigger turbo, but until then I just want to enjoy it." Nice one, Jono.

Thanks: "Zaheer Mohammad at Stylish Wheels for the wheels and guard rolling (3208 7744), a massive thanks to Nick Ashwin at NA Autosport and Engineering for the build and teaching me a lot along the way (0402 100 900), Ivan at Champs Bodyworks for the paint (3808 1145)." 🗝️



The car is just super clean inside and out. It's a real credit to Jono's hard work how it presents



SPECS

ENGINE: Stroked 4G63 four-cylinder turbo

PERFORMANCE: 352.6awkW, 594Nm

ENGINE HARDWARE: 4340 billet steel crank, Nitto I-beam conrods, forged pistons and rings, Kelford 226 custom camshaft and valvesprings. Head: face and back-cut valves, port bowls and short turns, added 0.30 shim under springs, machine-faced, Nitto 1.6mm head gasket, Bosch 2000cc injectors, FP Red ball-bearing turbocharger, custom alloy radiator, HKS oil cooler, Plazmaman Pro 76 series intercooler, custom 34in exhaust system, dual pump system (Walbro 225, Walbro 416), custom plenum, aftermarket coil packs, FAST fuel regulator, torque dampener, MoTeC M800 engine management system

DRIVETRAIN: Five-speed manual, Evo IX flywheel and solid competition clutch

SUSPENSION/BRAKES: GReddy coil-overs, Cusco strut braces front and rear, race brake pads

WHEELS/TYRES: 19x9.5in +22 BBS LM wheels

BODYWORK: T10 Blue By You/Pacific Blue respray in two-pack, debadged, Varis carbon-fibre extensions and front lip, rolled guards, carbon eyebrows, boot lip, vortex generator and power brace

INTERIOR: Recaro seats, Defi BF series oil temp and boost gauges in dual gauge pod, A'PEXi turbo timer, Momo steering wheel, Ralliart shifter, Pioneer head unit, Alpine speakers and amplifier



A new digi dash for the interior soon, but for now everything Jono needs is at hand

**WE SWITCHED
TO E85 AND
ON THE THIRD
RUN SHE
POPPED**



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WORDS BY BLAKE JONES
PHOTOGRAPHY BY ERIC TANG



TRYING TO MAKE A HOUSE BRICK GO FAST IS THE REAL CHALLENGE



Plenty of trial and error by Blake has seen the current exterior mods now allow this beast to navigate the circuit swiftly and cleanly

I bought it brand new back in Jan 2009 because I wanted a new reliable car that was good on fuel, quick and something that was practical. I was originally looking at a Suzuki Swift Sport, but I wasn't too keen on them and then a mate showed me a photo of the R-Colt. I hadn't seen one before and thought it looked pretty aggressive with the black trim and hood vent.

I did a little reading and found out they were pretty cool (and factory turbo) and in the price range I was looking to spend. I found one in Canberra that the dealer couldn't manage to shift, so I got it for a good price after a few long trips down there on the Hume.

I didn't start with any intentions. The mods were just a bit of fun to start as was hitting up the track. The entire car build has been continued challenges. There's very little aftermarket support for R-Colts beyond really simple bolt-on stuff so most things are custom made. On top of this, nobody else really pushes the car to the level I have other than maybe a guy in Perth, so it's always new undiscovered problems.

As an example, I managed to bend the stock sway links due to the force the car is getting when loaded up in corners. Mitsubishi clearly didn't think the car was going





WITH A 20PSI SPRING IT
WILL PROBABLY CLEAR
300KW AT THE WHEELS





to be hitting 1.5g in cornering when they designed it.

Other issues I've found is when you make three times the factory power (the most powerful R-Colt in Oz that I'm aware of), things just tend to break a lot. Last season was just one thing after another breaking. Sometimes you get lucky with stuff, like finding that Integra Type R sway links fit perfectly and are significantly bigger than the OEM links, or that Evo 3 brake options are a direct fit, but for the most part it's just an uphill battle.

The mods really started to kick off after a night in the Nasho when it threw a rod through the block. After a stupidly expensive tow home and finding I could put a screwdriver in through the sump and out the side of the block, the decision was made to forge the engine. Prior to all this, I basically just had simple bolt-ons and was boosting the crap out of the stock peashooter turbo.

The car was actually my daily driver for about four years until I got a job close to home where I could get the train. After that I went a bit mental with mods and really went into race car territory. I finally put on a decent turbo that could really use the built motor as well. I went with the EFR series due to the great features and response. Adam at JEM still hasn't managed to max the turbo out yet either. The last tune made 285kW@27psi and we ran out of boost duty cycle with a 15psi gate spring. With a 20psi spring it will probably clear 300kW at the wheels.

Things got pretty serious in 2013 when I decided on a whim to do WTAC. I stepped up the modding really quickly



285kW at the treads, 450Nm on United e85 and this little 1500cc 4g15t has powered it to 1.47.9 at WTAC 2014

**I WENT A BIT MENTAL WITH
MODS AND REALLY WENT INTO
RACE CAR TERRITORY**

but had no real practice throughout the year. In 2014 I decided to do more practice and development before WTAC and ended up breaking most things that had been installed in 2013. I did sort out a lot of the suspension setup and concentrated on using the power effectively that the car had.

In the end I actually ran three seconds faster than I did at 2013 with less power due to a boost issue. Of course, this also happened after I collected a tyre wall at turn four at about 80km/h head on (it's on YouTube, search "Team R-colt Mishap").

In the crash I ended up bending the chassis rails and smashing the sh*t out of the front bar/splitter, but surprisingly the suspension mounts were all good. We rebuilt the front bar and put on a new splitter that night and went back the next day to Eastern Creek and ran a time (didn't even set one on the first day). On the third and final session of the second day, I managed to actually get a head of the Suzuki swift that was running top all weekend. I didn't even know this at the time, and was on another hot lap when the radiator hose blew from being too close to the exhaust manifold due to the crash. I got towed back into the pits thinking I had binned the whole event, and found my team screaming at me that I'd set the fastest FWD time for the weekend in clubsprint. Funny thing was, my data from that last hot lap where the hose blew was actually faster again.

Overall, it's a pretty poor design for a track car, being

shaped like a brick and having terrible rear suspension and a really high centre of gravity. This is part of what kept pushing me to keep going though. After all, anyone can make an Evo go fast by just opening their wallet, trying to make a house brick go fast is the real challenge. As it stands though I'm running out of ideas regarding how to make the car faster without shedding more weight (can't if I want to stick to the rules) and adding power. I'm looking into approaching some actual suspension engineers to see if I can squeeze any more lateral G out of the car without fabricating whole new suspension systems for it, but they are hard to find, expensive, and generally don't want to look at an R-Colt. If any suspension engineers are keen to provide some suggestions, I'm all ears.

What would I do differently next time? Not waste time on useless mods or cheap parts. Buy once and buy right. Otherwise you end up fixing the fixes. Also data. Data for everything on everything constantly. Logging ECU parameters, extra sensors on everything etc. Data is invaluable. Would start getting this from the outset, not years later.

I find the car gets a lot of attention because it's so weird and quirky. People never really take it seriously though until it's shaming them (Audi RS5 drivers for example). All the mods are geared towards going faster. The only reason I changed the stereo was because I couldn't hear the stock

one over the top of the exhaust and the drone used to drive me insane when heading to Wakefield from Sydney. It's unique and pretty rare because they didn't sell very well here in Australia. It also attracts a lot of attention because it looks like a really small van, then shocks people when it flies past them down the straight.

What's the plan for the future? NSW Time Attack and WTAC again in 2015 hopefully. The chassis is starting to hit its limits without going to major engineering solutions, so I'm not sure how much further I want to take it yet.

I'd like to thank Andy and the people at Adaptronic for ECUs, all things electrical and letting me borrow a car trailer on the odd occasion. Adam (the tuning machine) and the JEM boys for the tune and engine work. Brad @ Le Klaw Bleu, Andy and Damian Labia for things I can't really say. Todd @ TDM Engineering for turbos, parts and advice. Ryan @ Right Image Car Care for polishing all the rubber marks off the car. Barry for late night emergency parts and rants. Hypertune for the titanium exhaust (looks cooler than it sounds). Project Mu Australia. The R-Colt forum guys. Team R-Colt for two years of putting up with my verbal abuse at the race track. And my family for putting up with the car being stored at their house, piles of old parts in the garage and continued oil spills. 🛢️

SPECS

ENGINE: 1500cc 4g15t

PERFORMANCE: 285kW at the treads, 450Nm on United e85

BEST TIME & SPEED: Never dragged cause it will break something but did 1.47.9 @ WTAC 2014 = fastest FWD in Clubsprint two years in a row

ENGINE HARDWARE: Pro Flo and JEM built motor, factory block, balanced crank, custom Spool forged H-beam rods, custom Wiseco pistons, Wiseco rings, Tighe custom 272 cams, custom valvesprings, slight port and polish on heads, factory sump, oil pump and water pump, Walbro 255 fuel pump, Injector Dynamics 1000cc injectors, factory intake manifold, Borg Warner EFR 6258, Garrett bar and plate intercooler with custom end tanks, factory radiator, Aeroflow oil cooler with Greddy sandwich plate, custom ceramic-coated manifold, custom 3in stainless steel lobster claw dump, 3in titanium straight dump back, 2.5in stainless muffler for street use otherwise your ears bleed, Adaptronic 440 with boost by gear wired by Adaptronic, Turbosmart internal BOV for EFR, Turbosmart FPR, Odyssey motorbike battery, homemade shitty turkey tray airbox

DRIVETRAIN: Stock Beatrush short shifter, custom Jim Berry Race clutch, 1.5 clutch type built by Ralliart, LSD

BRAKES/SUSPENSION: Front: Project Mu. 2 piece Evo 4 GSR redrilled for 4x114, Wilwood Dynapro 6 calipers, PMU Rc09 and Wilwood Polymatrix A pads, stock booster and master, Cusco master cylinder brace, ARP extended wheel studs from an Evo. Rear: DBA 4000 discs, stock calipers, PMU B spec pads, ARP extended studs. 8kg BC's with Blitz shocks all round, Cusco swaybars, Moonface tie rod ends and ball joints, Le Klaw Bleu sway bushes and hardrace dc2r links, Whiteline control arm bushes and caster kit, rear Le Klaw Bleu bushes and camber shims

WHEELS/TYRES: Front: Buddy Club p1 with Yokohama AD08R: track - 17x9 with 255/40/17, street - 16x8.5 with 225/45/16
Rear: Buddy Club p1 with Yokohama AD08R: track - 17x9 with 245/40/17, street 16x8.5 with 225/45/16

BODYWORK: Factory paint, all bodywork by Blake: custom carbon fibre front splitter, YR Advance carbon fibre adjustable rear wing. Beatrush aluminum undertray, air guide through front bar to oil cooler, blocked off vents and fog lamps with aluminum panel carbon fibre bonnet. Front wings are pumped, stretched, rolled and spaced for wheel clearance. Rear guards are rolled and butchered with an angle grinder. Aero catch body fasteners and hood latches

INTERIOR: Bride carbon fibre fixed back bucket, stock front passenger seat, rear seats removed, Beatrush short shifter + Carbing shift knob, Innovate MTXL wideband, Autometer Ultralite II boost gauge, Race Technology dash 4 display, Race Technology DL1 data logger, Alpine stereo and speakers





**I'D SET THE FASTEST
FWD TIME FOR
THE WEEKEND IN
CLUBSPRINT**

All business in here with Bride carbon fibre fixed back bucket, Race Technology dash 4 display and Race Technology DL1 data logger among other mods



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*END*_{of} MONTH **MEET**

MAKE SURE YOU CHECK OUT THE END OF MONTH MEETS AT SYDNEY DRAGWAY

PHOTOGRAPHY BY MATTHEW EVERINGHAM





A GREAT REPRESENTATION OF THE
DIVERSITY OF OUR AUSSIE CAR SCENE



Fast Fours & Rotaries are getting behind our local car scene and helping promote Aussie events big and small. The recent resurgence in everything from small local meets through to large-scale gatherings is something the magazine is fully throwing its support behind. Let's see how far we can take this revival of our car-loving lifestyle.

Zen Garage and JDMST have been hosting the End of Month Meet (EOMM) out at Sydney Dragway, with excellent turnouts of 500+ cars. A variety of rides help make the meet a great





*LET'S SEE HOW FAR WE CAN TAKE THIS
REVIVAL OF OUR CAR-LOVING LIFESTYLE*





representation of the diversity of our Aussie car scene. Rotors, WRXs, EVOs, Civics, Skylines and even the odd eight-banger come together to check out each other's rides in a relaxed atmosphere.

Reportedly, the event organisers are looking to add the opportunity to run your car down the quarter mile in a Drag Battle, which is a great addition to this meet. The more encouragement we can give car enthusiasts to keep their runs on the track, the better, and Sydney Dragway can provide its world-class facility for just such a purpose. The last thing we need is to provide more camera fodder





for sensationalist media programs. By promoting the right image to the public about how car enthusiasts like to spend their time hanging out, the less unnecessary knee-jerk reactions by uninformed media representatives, politicians and their underlings we have to deal with.

Make sure you check out the EOMM page on Facebook for the latest happenings and join the EOMM group, and stay tuned to www.facebook.com/FastFoursMagazine for more coverage of the meets. 🗝️





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IF YOU'RE LOOKING FOR THE
HOME OF BURNOUTS AND BIG
POWER, WELCOME

PHOTOGRAPHY BY ERIC TANG

KING'S LANDING



Believe it or not, but owner Chris Joseph here (23) is actually a gravedigger at Sydney's Rookwood Cemetery. That might seem like a morbid job, but it does put into perspective just how important it is to live life. Enter Chris's sleeper toy.

"This has been my realistic dream car since I was young. The first time I drove one I just knew I had to have one. I built this car for a 10sec street car and something that would also do burnouts how I like it," Chris laughs.

The 1999 S15 has been in his possession now since November 2010, a 1992 Honda Integra and Silvia Autech running previous while Chris was one his Ps. In total, the build took 10 months and cost a somewhat substantial \$50,000 including the price of the car itself.

Says Chris, "I bought this car nine months before I got my full licence, so I decided to take the turbo out for the remainder of my Ps. A month before I got my full licence, a few mates came over to help put the stock turbo back along with a GReddy intercooler and turbo-back exhaust, upgraded pump, dual-stage boost controller and Nistune ECU. It made 190rwkW. It was a fun, responsive car at the time and was good enough power for me to get used to driving a turbo car. I took it to the drags a few





IT FELT AMAZING TO DRIVE
THE CAR AFTER SUCH A BIG
TRANSFORMATION



times and managed a 13@109mph on street tyres."

The next stage with new GCG GT3076 saw 285rwkW@22psi on 98. This was on the stock motor and drivetrain just in time for Powercruise 2012. "This was my first time entering Powercruise, and damn was it a sick weekend. The car did well and the car went through a few tyres. That's when the bug hit the most."

The car moved down into the low 12s and the driveline swapped over to a stronger RB25 unit. With the gearbox already out of the way, the engine was just waiting for the same treatment. Chris couldn't resist, pulling the motor too and writing up a rather large shopping list that would see the car off the road for the next 10 months.

"The owner of Black Diamond Bodyworks is like a cousin to me. We spoke about doing something different with the car and came up with the idea of matte grey with the blue engine bay. He wouldn't let me see any photos of the car until it was complete, so as soon as I finished work I went down to the shop and couldn't believe what I was seeing. It was perfect. It felt amazing to drive the car after such a big transformation."

A full tune came next, with Powertune tweaking the proverbial for 305rwkW@19psi with a restriction caused

IT DEFINITELY
TAKES
EVERYTHING
THAT GETS
THROWN AT IT
NOW





THE FIRST DRIVE OF THE CAR ON THAT POWER WAS JUST NUTS. IT WAS A TOTALLY DIFFERENT CAR TO DRIVE, BLAZING TYRES EVERYWHERE



by the mid-muffler. With the exhaust fixed by Todd at TVEmotorsport, and repaired driveshaft, Kenji rang through with a figure of 402rwkW. "I had the biggest smile on my face for the rest of the day. The first drive of the car on that power was just nuts. It was a totally different car to drive, blazing tyres everywhere."

More Powercruise fun followed. Third gear was blown thanks to a heavy dosage of dumping one day, requiring a drive home without it in the wet. "That was an interesting drive," laughs Chris. That's where the twin-plate clutch came in via Scott from Western Clutch Services. "It definitely takes everything that gets thrown at it now."

As for what he'd do differently next time, Chris says, "I'd drop an RB26/30 in it or go with a bigger turbo and SR20VE head. I'd definitely run a built gearbox and get some massive wheels under the rears with no camber." The reason. "To leave wider lines." And that, my friends, says it all.

Thanks: "A big thanks to my fiancé Laura for all her support and for putting up with the late nights and headaches. A massive thanks to Justin from Black Diamond Bodyworks (0450 043 652) all the boys that helped (Nath, Vish, Vinay, Sidd, Matt and the rest, Powertune Australia (9756 6789), Dominator Engines (9681 3462), Western Clutch Services (9623 1233), Michael from GCG, Mark from ART Performance Parts, JDM Accessories, TVEmotorsports."



SPECS

ENGINE: 2L SR20DET four-cylinder turbo

PERFORMANCE: 402rwkW@29psi (E85 flex)

ENGINE HARDWARE: ACL Race bearings, ARP main studs, OEM balanced crank, Spool rods, CP pistons, Tomei camshafts, Supertech +1mm oversized valves, race ported head, Tomei head gasket, OS Giken adjustable cam gears, ARP head studs, blueprinted, Powertune Australia twin in-tank pump kit with 2x Aeromotive 340-series pumps, Bosch 2000cc injectors, Powertune Australia, Aeromotive fuel-pressure regulator, GReddy intake manifold, Plazmaman 72mm throttlebody, GT3076 .63 rear GCG high-mount kit, GReddy intercooler, oil filter relocation kit, and radiator, custom dump pipe, GReddy front pipe, custom cat-back with twin tips, SplitFire coil packs, Haltech Platinum Pro engine management system, Haltech 4bar boost solenoid, battery relocated to boot

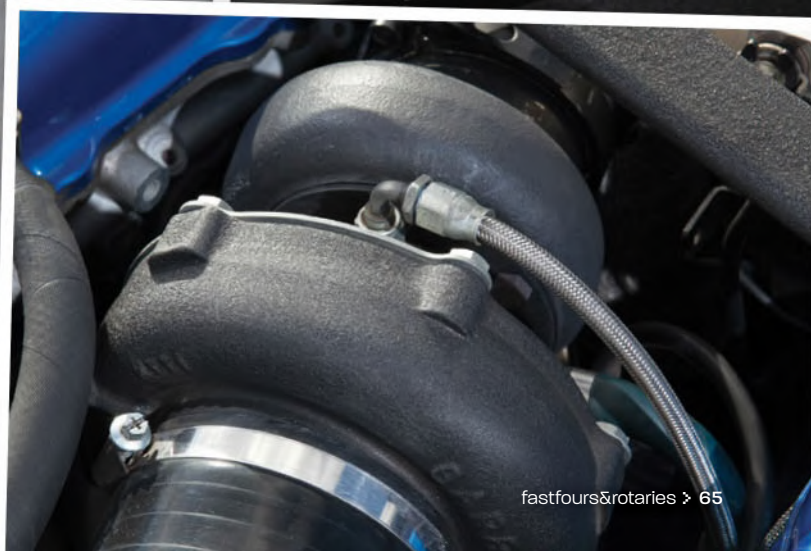
DRIVETRAIN: Series II R33 RB25DET gearbox, ART Performance Parts SR-RB adaptor kit, 10in heavy-duty clutch upgrade and billet flywheel, Powertune Australia one-piece tailshaft and custom-made gear shifter

BRAKES/SUSPENSION: HKS coil-overs with adjustable camber tops front, HKS coil-overs (stock set for drags) rear, Hardrace rear adjustable camber arms and toe arms, Bendix brake pads

WHEELS/TYRES: 350Z 18x8in +30 wheels, 215/40 front and 225/40 rear tyres, Mickey Thompson ET Streets 235/60/15 on Ford Steeles for drags

BODYWORK: Custom mix grey respray with soft feel matte clear, front bar middle section cut out and made to be larger, engine bay holes shaved, custom blue engine bay

INTERIOR: R33 shifter gearknob, Powertune custom shifter, three Defi gauges (oil temp, oil pressure, water temp) and control unit, Garrett boost gauge, Zeitronix wideband gauge, E85 sensor gauge, Fusion amplifier, Kenwood speakers and subwoofer, Sony Xplod head unit



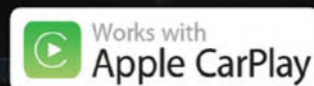


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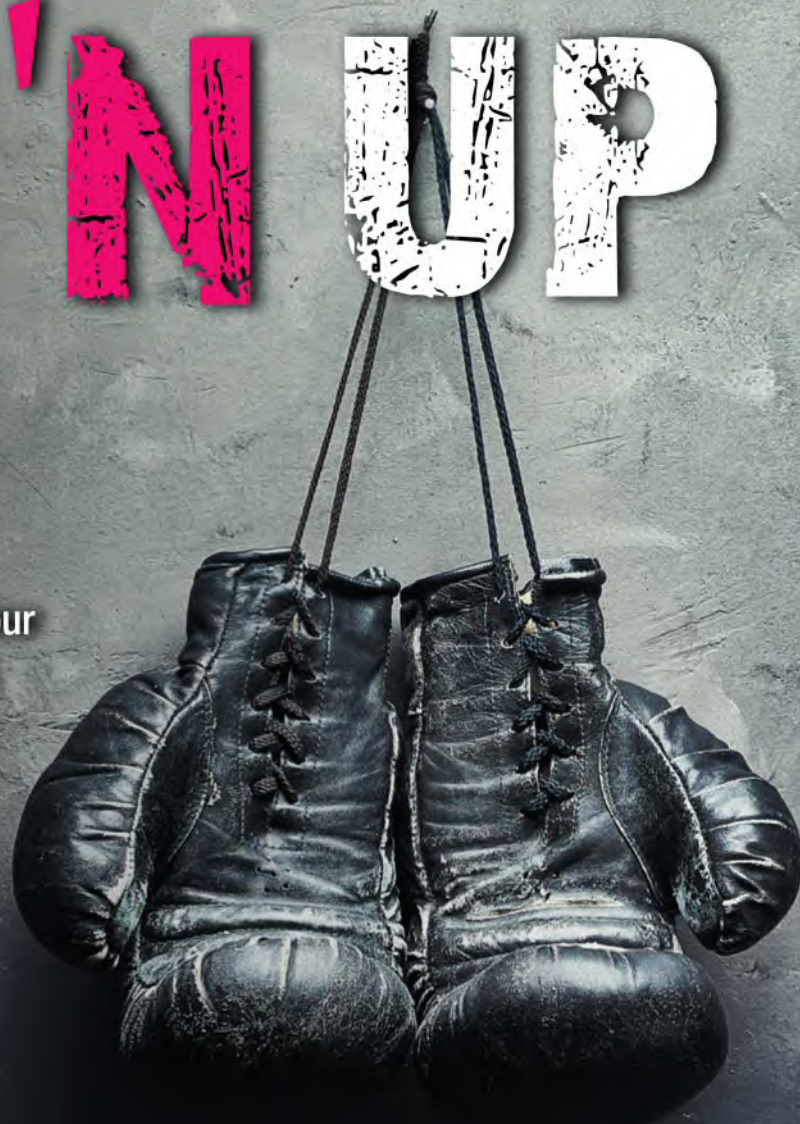
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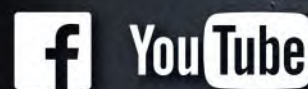
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TAKE A WIDE LINE





CAMS NSW 2014 FUTURE STAR
COOPER CALMAN HAS BEEN
BREAKING TRACK RECORDS AND
WINNING CLASS CHAMPIONSHIPS
IN THIS SERIES 6 RX7 THAT HIS DAD
TURNED INTO A RACE CAR

WORDS BY SAM HOLIER
PHOTOGRAPHY BY ERIC TANG



Adjusting the dampers to fine-tune the setup is extremely easy



Cooper Calman's father Peter says he "bought this car in late 2010 for Cooper to do the Young Driver Development at Ringwood (Park, near Raymond Terrace, NSW)." Born in May 1998, Cooper was just 12 years old at the time and the car started out as a grey import, literally. Well, Mazda would have called it silver but close enough.

"Coop drove it for a couple of years as-is" says Pete. "We developed the car as Cooper's skill levels have developed. We're now at the point where the skill levels have outpaced the car's performance" which I can confirm to be the truth and not just something a proud dad says, because I've witnessed it for myself.

Cooper hasn't just been fast for a junior, he's been breaking class records for 2B Marque Sports Over 1600cc at various rounds of the NSW Hillclimb Championship and he also posted the fastest Tin Top times at both the Kempsey and Huntley rounds in 2014, plus there are many other impressive achievements as a result of his incredible on-track pace, and all before he's been allowed to drive a car of any description on public roads by himself, let alone a turbocharged sports car.

BUILDING THE MACHINE

When a person turns 14 years old CAMS will allow them to compete in what it calls Speed Events, otherwise known as Hillclimbs and Supersprints. So to improve the car for these corner-focussed disciplines Pete says "we have concentrated on gaining speed from suspension, brake and tyres; the motor is pretty much in its standard configuration apart from the aftermarket computer and a bridge port."

To turn the grey import into a fast and safe race car it was stripped inside, caged, and modified for some other safety gear including the race seat and harness. It took a little massaging of the floor to get the seat to fit but it was worth it for the lateral head protection.



COOPER HASN'T JUST BEEN FAST FOR A JUNIOR, HE'S BEEN BREAKING CLASS RECORDS AT NSW HILLCLIMBS



Stripped out and caged up for safety, but the shell and the suspension layout both remain standard, as does the basic rotary turbo driveline configuration

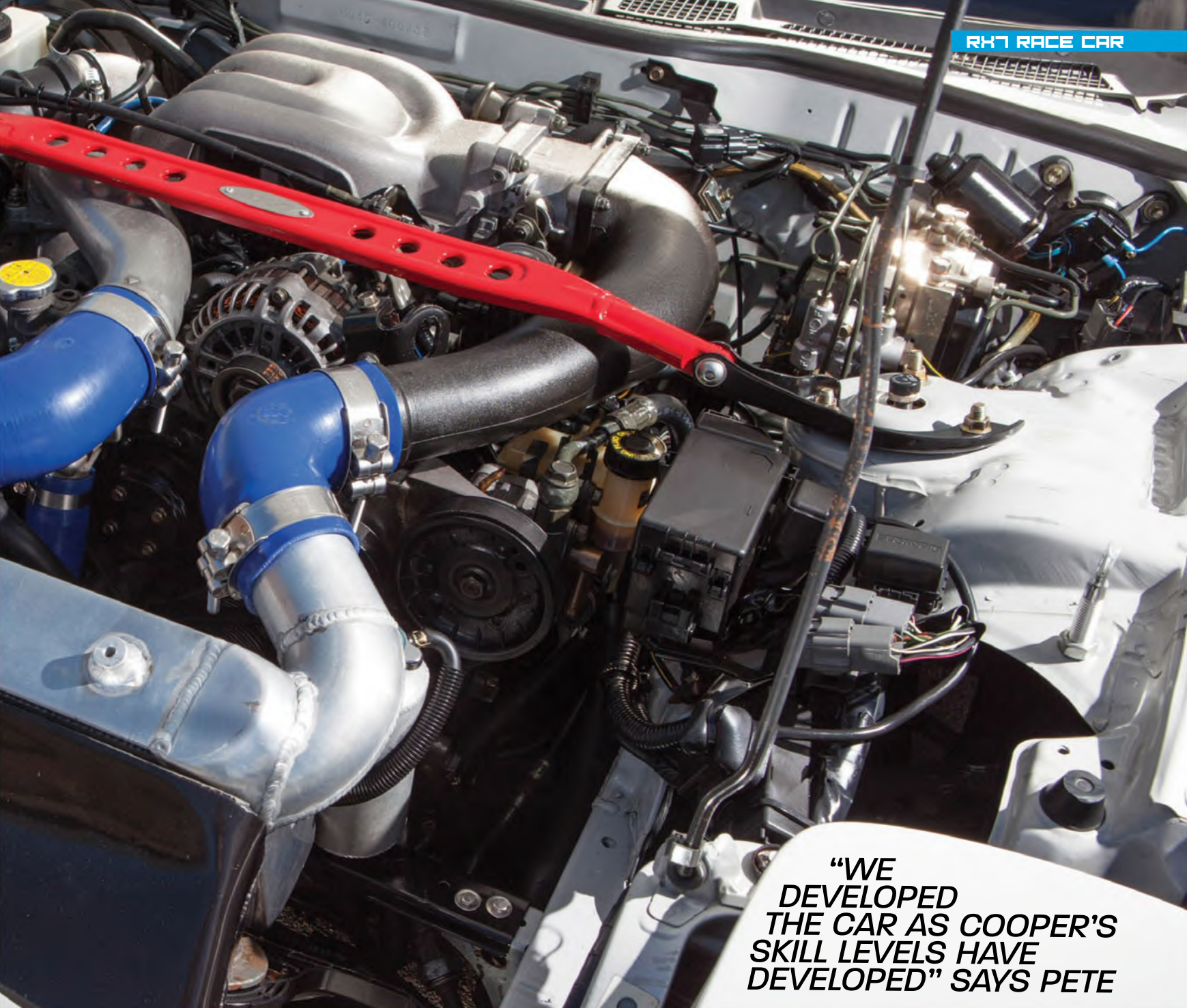


The Porsche Cup slicks and big brakes are good for as many quick laps as Cooper can get in during a Supersprint session, in fact they could both do many more before heat ever becomes an issue



The engine mods to the rebuilt 13B aren't extensive. It has ceramic seals, a Bridge Port job, big injectors, a big intercooler, de-sequentialised standard twin-turbos controlled by a Turbosmart e-Boost Street, and an Apexi Power FC ECU





“WE DEVELOPED THE CAR AS COOPER’S SKILL LEVELS HAVE DEVELOPED” SAYS PETE



After this the body was rubbed back, the shopping trolley dents smoothed out and then the car was painted white in and out before the first set of sponsor livery was applied.

A little Sparco wheel on a quick-release hub were also added to the interior, along with heat shielding over the driver's floor and a switch panel for a start button and battery isolation switch. These have both been changed since for a wheel that isn't quite so small and to add a bank of warning lights but their basic descriptions remain the same.

ROTARY WORK

The first thing done to start squeezing a bit more power from under the bonnet was switching to an Apexi Power FC and hand controller to make tuning easy to do either on the dyno or at the track, and that was followed by a Turbosmart eBoost Street to manage the boost and allow easy in-cabin adjustment. The induction now also has a larger front-mount intercooler with silicone

joints connecting the aluminium pipes.

The 13B rotary engine has been rebuilt (a couple of times now since they need it more often) and features ceramic seals and bridge-ported end plates. The factory twin-turbo hardware remains, but it was modified to make them work together instead of in sequence, and it was a simple mod as Pete explains.

“The factory (OEM) turbos are designed to work sequentially; the little turbo spools up first followed by the larger turbo for that extra kick of boost. We had Ric Shaw de-sequentialise this making both turbos spool up at the same time. This is simply done by welding the (first) wastegate open.”

A set of Bosch 1,000cc/min injectors were installed on the stock manifold, and they are fed via a 1L surge tank and two Bosch pumps. The engine also benefits from a decent-size full-length single exhaust system with enough mufflers to keep the hillclimb organisers happy. However, even with this work to improve the acceleration Pete only says the engine is making a relatively modest 200kW.


MAKE IT TURN

As with many hillclimb and circuit race cars the main focus has been on improving the corner grip and the car's ability to fully use the engine's output. The single most important thing is having the most appropriate tyres, and when running in the 2B Marque Sports Over 1,600cc class at Hillclimbs the car will have a set of soft Yokohama A050 semi-slicks, ranging from 255/40/18 up to 295/30/18 at some events.

In the Sports Sedan category (Type 4) at NSW Supersprints - which Cooper started entering at state level in 2014, finishing his debut season 2nd of 29 entrants in Type 4 and 2nd of 12 in Class 4C, all whilst turning 16 during the season - the RX7 is most often shod with the pictured Michelin 27/65-18 slicks (Porsche Cup N2).

The car also has BC 3-way adjustable coilovers, a front strut brace and polyurethane bushes to improve the suspension's dynamics. Meanwhile the brakes are huge with VTTR Racing multi-piston calipers front and rear plus Hawk pads so Cooper can do as many laps as he wants without fear of fade.

FUTURE STAR

As we indicated in the introduction, in recognition of his many achievements in the car at such a young age, at the 2014 CAMS NSW and ACT annual presentation dinner Cooper was presented with the Future Star Award. He knew he was a nominee, but he didn't find out that he'd actually won until it was announced. With his driving talent and his very measured approach to competition we too can see great things for his future in motorsport. 



It took some effort, and some floor massaging, to get that rather safe racing seat in the little RX7



Cooper is just 16 in this shot, but what would you do to have either his car or his driving talent, at any age?

SPECS

OWNER: Peter Calman

DRIVER: Cooper Calman

VEHICLE: 1996 Mazda FD3S RX7 (used import)

PAINT: White and blue

STYLING: Sponsor signwriting

ENGINE: 13B rotary, twin-turbo

ENGINE MODS: Rebuilt with ceramic seals and bridge-ported end plates, twin turbos de-sequentialised (first wastegate welded open), Bosch 1,000cc/min injectors, Apexi Power FC ECU and hand controller, Turbosmart eBoost Street boost controller, larger front-mount intercooler

EXHAUST: Full-length single system with mufflers

GEARBOX: 5-speed

DIFF: LSD

SUSPENSION: BC 3-way adjustable coilovers, front strut brace, polyurethane bushes

BRAKES: VTTR Racing multi-piston calipers and large discs front and rear, Hawk pads

WHEELS/TYRES: Z-7 with Michelin 27/65-18 slicks (or Yokohama A050)

INTERIOR: Partially stripped, safety cage, Sparco seat, RPM harness, Microtech LCD display with lap timer, RPM wheel on quick-release hub, heat shield plates on driver's floor, alloy pedals

ANYTHING ELSE: Odyssey battery in cabin, two Bosch fuel pumps and 1L surge tank

COST: Cooper says "ask Dad"

WHO'S RESPONSIBLE: Ric Shaw Racing, Wideline Windows and Doors, Coating Supplies Australasia, Dulux, AU Motorsport, EPA Extrusions, Success Aluminium, Suspension Concepts, and Sign Image



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CB-2 - Gravity Feed Coolant System (P220)
XDP2000 - Soluble Metal Cutting Fluid (S090A)
3 Piece - Sheet Metal Step Drill Set - HSS (D1071)
25 Piece - Precision Jobber Drill Set - HSS (D1272)
9" - Drill Press Locking Clamp (C103)
Standard - Drill Press Vice (V125)

\$690
SAVE \$81.10

BG-8 INDUSTRIAL BENCH GRINDER

- 200mm wheels
- Fine/coarse grit
- Safety stop switch
- 1hp, 240V motor



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(G161)

PACKAGE INCLUDES:

GSS-200W - Bench Grinder Stand (G182)
LA-362 - Multitool Grinding Attach. (L085)
Grinding Wheel Dresser (G189A)
915 x 50mm Scotchbelt (A36203)
Belt Cleaning Stick (G183)
178mm Velcro Backing Disc (A0700)
ALUMINIUM OXIDE
178mm Disc Pack 80G (A5333)
178mm Disc Pack 120G (A5335)
915 x 50mm Belt Pack 80G (A8002)
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BF-16V MINI MILL DRILL

- Electronic variable speed
- Geared & Tilting Head
- Dovetail column
- Head tilts $\pm 90^\circ$
- 500W 240V motor
- Travels:
(X) 220mm
(Y) 160mm
(Z) 210mm



Order code:
(M649)

PACKAGE INCLUDES:

ST-1620V - Mill Drill Stand (M651)
3MT x ER32 - Collet & Chuck Set - 8 Piece (C922B)
HF-1/2 - Clamp Kit - 58 piece (C090)
10 Piece Metric - Slot Drill & End Mill Set - HSS (M3301)
VK-4 - K-Type Milling Vice (V104)

\$1800
SAVE \$249.30

AL-51G BENCH LATHE

- 230x500mm turning capacity
- 20mm spindle bore
- Quick change gearbox
- Speeds 100-1800rpm
- 0.55kW, 240V motor



Order code:
(L160)

PACKAGE INCLUDES:

ST-51G - Lathe Stand (L263)
5 piece - Lathe Turning Tool Kit - Insert Type (L0055)
Heavy Duty - Drill Chuck - Keyed Type (C289)
2MT x JT6 - Drill Chuck Arbor (D442)
Live Centre (C050)
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